LG

Life's Good

OWNER'S MANUAL

LED LCD TV / LCD TV

Please read this manual carefully before operating your set
and retain it for future reference.

LED LCD TV MODELS

32LS3400	32LS3450	22LS3500	22LS3510
42LS3400	42LS3450	26LS3500	26LS3510
		32LS3500	32LS3510

LCD TV MODELS

32CS460	32CS560
32CS461	37CS560
42CS530	42CS560

www.lg.com

IMPORTANT SAFETY INSTRUCTIONS

Always comply with the following precautions to avoid dangerous situations and ensure peak performance of your product.

WARNING/CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING/CAUTION
- TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. *Wash hands after handling.*

Read these instructions.
Keep these instructions.
Heed all warnings.
Follow all instructions.

• Do not use this apparatus near water.

• Clean only with a dry cloth.

• Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

• Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

• Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet (Can differ by country).

- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

- Only use attachments/accessories specified by the manufacturer.

- Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

- Unplug this apparatus during lightning storms or when unused for long periods of time.

- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Do not stick metal objects or any other conductive material into the power cord. Do not touch the end of the power cord while it is plugged in.

- Keep the packing anti-moisture material or vinyl packing out of the reach of children. Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.

- CAUTION concerning the Power Cord (Can differ by country):
It is recommended that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain. Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock. Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized service. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance. Do not move the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.

ENGLISH

- **Warning** - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.

- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).

- **Grounding**
  (Except for devices which are not grounded.)
  Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.

Short-circuit Breaker

Power Supply
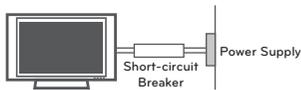
- **DISCONNECTING DEVICE FROM THE MAIN POWER**
  Mains plug is the disconnecting device. The plug must remain readily operable.

- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.
- Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user's authority to operate this product.
- **ANTENNAS Outdoor antenna grounding** (Can differ by country):
  If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur. Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
  Antenna grounding according to the National Electrical Code, ANSI/NFPA 70

Antenna Lead in Wire
Ground Clamp
Electric Service Equipment
Ground Clamp
Antenna Discharge Unit (NEC Section 810-20)
Grounding Conductor (NEC Section 810-21)
Power Service Grounding Electrode System (NEC Art 250, Part H)
NEC: National Electrical Code
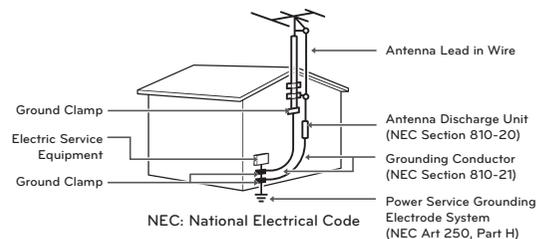
- **Cleaning**

  When cleaning, unplug the power cord and wipe gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzine.

- **Moving**

  Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press or put stress on the front panel of the TV.

- **Ventilation**

  Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials while plugged. Do not install in excessively dusty places.

- If you smell smoke or other odors coming from the TV, unplug the power cord and contact an authorized service center.

- Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil or pen, or make a scratch on it.

- Keep the product away from direct sunlight.

- Never touch this apparatus or antenna during a thunder or lightning storm.

- When mounting a TV on the wall, make sure not to install the TV by hanging the power and signal cables on the back of the TV.

- Do not allow an impact shock or any objects to fall into the product, and do not drop anything onto the screen.

- **Dot Defect**

  The Plasma or LCD panel is a high technology product with resolution of two million to six million pixels. In a very few cases, you could see fine dots on the screen while you're viewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.

- **Generated Sound**

  "Cracking" noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.

  Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product.

  This generated sound does not affect the performance and reliability of the product.

- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot. This does not affect the performance of the product or cause defects in the product.

- If the TV feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with TV. Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the TV's performance. Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

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DISPOSAL (Hg lamp only used in LCD TVs)

The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

Preventing "Image burn" or "Burn-in" on your TV screen

- If a fixed image displays on the TV screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is "image burn" or "burn-in" and not covered by the warranty.
- If the aspect ratio of the TV is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.
- Avoid displaying a fixed image on the TV screen for a long period of time (2 or more hours for LCD, 1 or more hours for the Plasma TV) to prevent image burn.

ENGLISH

For USA and Canada

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation of the device. Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

Additional information of the manual

Viewing the owner's manual

The owner's manual in PDF file format is supplied on the enclosed CD. Install the Adobe Acrobat Reader to view the owner's manual on your PC.

1 Insert the supplied CD.
   The web page appears automatically.

2 Click Owner's Manual on the web page.

3 View the owner's manual.

> **! NOTE**
> • If the web page does not appear automatically, access My computer and then click LG and **index.html** to view the owner's manual.

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TABLE OF CONTENTS

⚠ **NOTE**

- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.

ENGLISH

INSTALLATION PROCEDURE

1 Open the package and make sure all the accessories are included.
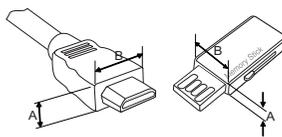
2 Attach the stand to the TV set.

3 Connect an external device to the TV set.

ASSEMBLING AND PREPARING

Unpacking

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and item.

> **NOTE**
> - The items supplied with your product may vary depending on the model.
> - Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
> - For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm (0.39 inches) thick and 18 mm (0.7 inches) width.
> - Use an extension cable that supports USB 2.0 if the USB cable or USB memory stick does not fit into your TV's USB port.
>
> *A ≦ 10 mm (0.39 inches)
> *B ≦ 18 mm (0.7 inches)

> **CAUTION**
> - Do not use any unapproved items to ensure the safety and product life span.
> - Any damages or injuries by using unapproved items are not covered by the warranty.
> - In case of some model, the thin film on screen is a part of TV, So don't take it off.

For CS460, CS461, LS3400 series
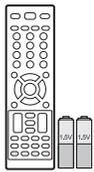
Remote control, Batteries (AAA)
(See p.35)
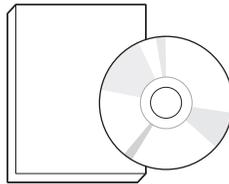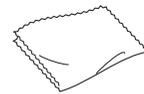
Owner's manual, CD manual

Polishing cloth
(Depending on model)
Use this to remove dust from the cabinet.
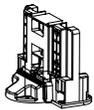
Stand Body
(See p.19)
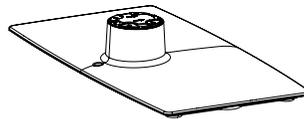
Stand Base
(See p.19)

Stand Screws
8 EA, M4 x 20
(See p.19)
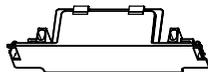
Protection cover
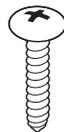
Desk-mount Screw
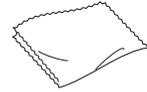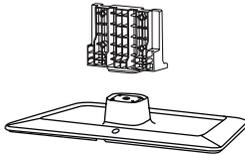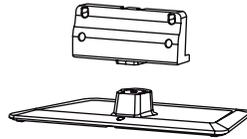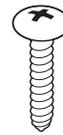(See p.25)

Power Cord

For LS3450 series
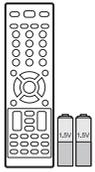
Remote control,
Batteries (AAA)
(See p.35)
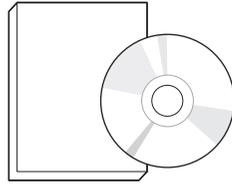
Owner's manual,
CD manual

Polishing cloth
(Depending on model)
Use this to remove dust
from the cabinet.

(for 32LS3450)

(for 42LS3450)

Stand Body / Stand Base
(See p.20)

Stand Body / Stand Base
(See p.21)

Desk-mount Screw
(See p.25)

(for 32LS3450)

(for 42LS3450)
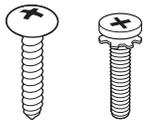
Stand Screws
2 EA, P4 x 16
4 EA, M4 x 20
(See p.20)
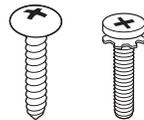
Stand Screws
4 EA, P4 x 16
4 EA, M4 x 14
(See p.21)

Power Cord

(for 32LS3450)
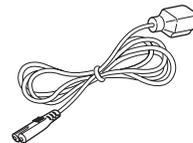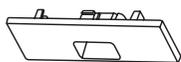
Protection cover
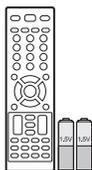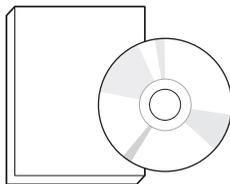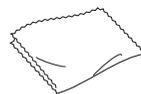
Cable holder
(See p.28)

ENGLISH

For CS530, CS560 series

Remote control,
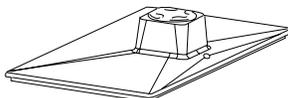**Batteries (AAA)**
(See p.35)

Owner's manual,
CD manual

Polishing cloth
(Depending on model)
Use this to remove dust
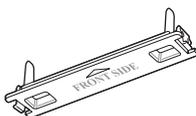from the cabinet.
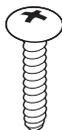
Stand Body
(See p.22)

Stand Base
(See p.22)

Stand Screws
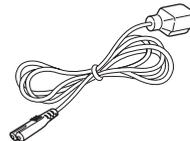8 EA, M4 x 20
(See p.22)

(For 42CS530, 32/42CS560)

Protection cover

Desk-mount Screw
(See p.25)
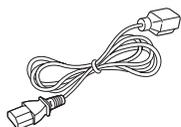
Power Cord

(For 37CS560)

Power Cord

For 22/26LS3500, 22/26LS3510
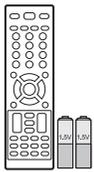
Remote control,
Batteries (AAA)
(See p.35)

Owner's manual,
CD manual

Polishing cloth
(Depending on model)
Use this to remove dust
from the cabinet.

(For 22LS3500, 22LS3510)

Stand Body
(See p.23)

Stand Base
(See p.23)

Stand Screws
2 EA, P4 x 16
(See p.23)

(For 26LS3500, 26LS3510)

Stand Screws
2 EA, M4 x 14
(See p.23)

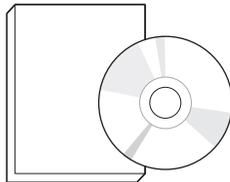**Cable holder**
(See p.28)

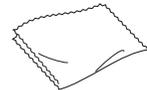**Power Cord**

AC/DC Adapter
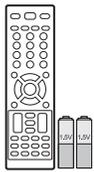
ENGLISH

For 32LS3500, 32LS3510

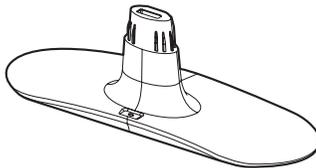**Remote control,**
Batteries (AAA)
(See p.35)
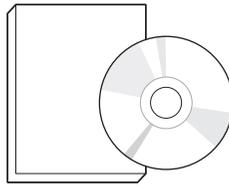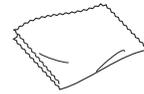
Owner's manual,
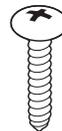**CD manual**

Polishing cloth
(Depending on model)
Use this to remove dust
from the cabinet.
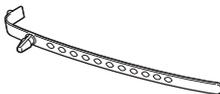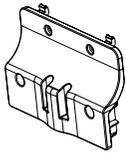

Stand Body
(See p.24)
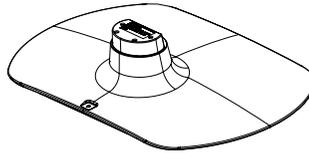
Stand Base
(See p.24)
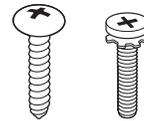
Stand Screws
4 EA, P4 x 16
4 EA, M4 x 14
(See p.24)
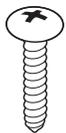
Desk-mount Screw
(See p.25)

Cable holder
(See p.28)

Power Cord

Parts and buttons

For CS460, CS461, CS530, CS560, LS3400 series

Screen

Remote control and
Intelligent sensors[1]

Power indicator

Speakers

∨ ∧ − + OK ◉ SETTINGS INPUT ⏻/I

For CS460, CS461,
LS3400 series

Touch buttons[2]

∨ ∧ − + OK ◉ SETTINGS INPUT ⏻/I

For CS530,
CS560 series

Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
SETTINGS	Accesses the main menus, or saves your input and exits the menus.
OK ◉	Selects the highlighted menu option or confirms an input.
- +	Adjusts the volume level.
∨ ∧	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.

2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

ENGLISH

For LS3450 series

Screen   buttons

Speakers

Remote control and
intelligent sensors[1]

Power indicator

OK⊙
SETTINGS
INPUT
⏻/|

Touch button[2]	Description
⏻	Turns the power on or off.
INPUT ↙	Changes the input source.
SETTINGS **S**	Accesses the main menus, or saves your input and exits the menus.
OK ✔	Selects the highlighted menu option or confirms an input.
- +	Adjusts the volume level.
∨ ∧	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.

2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

ENGLISH

For LS3500, LS3510 series

Screen

Remote control and
Intelligent sensors[1]

Power indicator

Speakers

OK ⦿   SETTINGS   INPUT   ⏻/I

Touch buttons[2]

Touch button[2]	Description
⏻ / I	Turns the power on or off.
INPUT	Changes the input source.
SETTINGS	Accesses the main menus, or saves your input and exits the menus.
OK ⦿	Selects the highlighted menu option or confirms an input.
- +	Adjusts the volume level.
⌄ ⌃	Scrolls through the saved channels.

1 Intelligent sensor - Adjusts the image quality and brightness based on the surrounding environment.

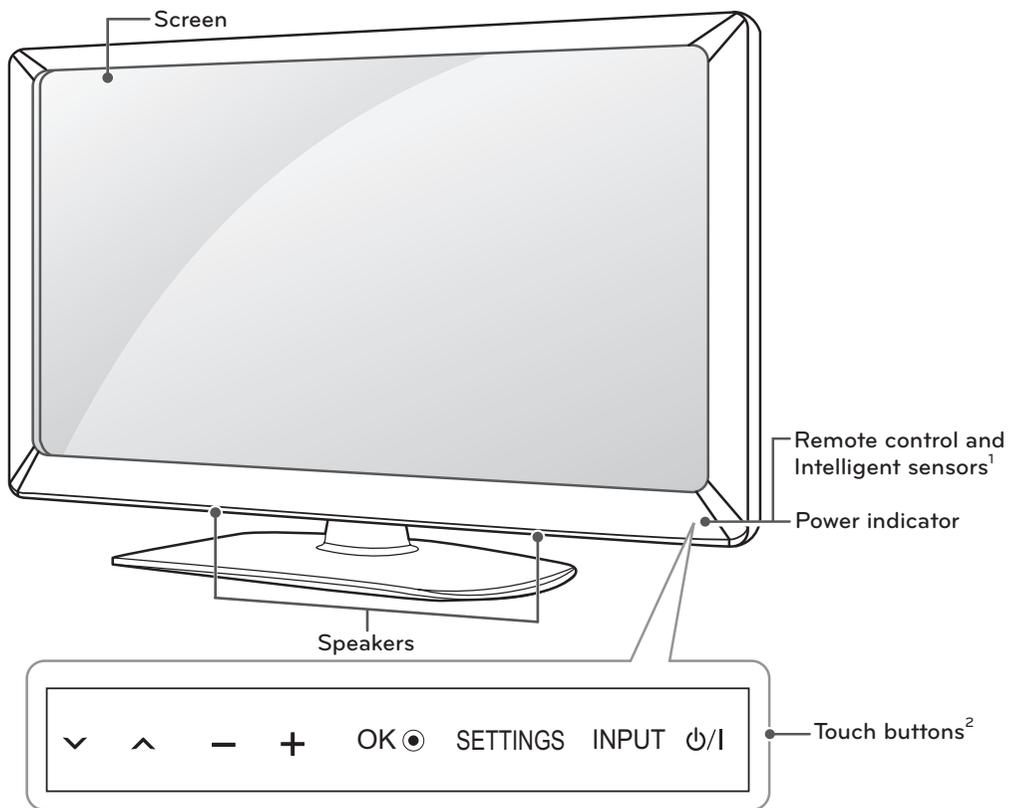2 All of the buttons are touch sensitive and can be operated through simple touch with your finger.

ENGLISH

Lifting and moving the TV

When moving or lifting the TV, read the following to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

> ⚠ **CAUTION**
> - Avoid touching the screen at all times, as this may result in damage to the screen.

- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.

- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grill area.
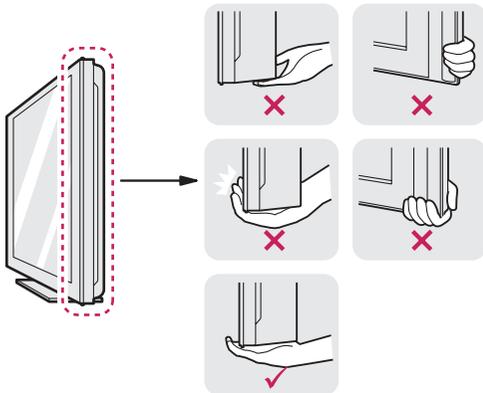
- When transporting a large TV, there should be at least 2 people.
- When transporting the TV by hand, hold the TV as shown in the following illustration.
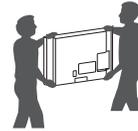
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright, never turn the TV on its side or tilt towards the left or right.

Setting up the TV

Put your TV on a pedestal stand and mount the TV on a table or wall.

Attaching the stand

If you are not mounting the TV to a wall, use the following instructions to attach the stand.

For CS460, CS461, LS3400 series

1

4 EA
M4 x 20

Stand Body

Front

Stand Base

2

⚠ **CAUTION**
• When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

3

4 EA

M4 x 20

⚠ **CAUTION**
• Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
• Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.

⚠ **NOTE**
• Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

ENGLISH

For 32LS3450

1

2EA

P4 x 16

Stand Body

Stand Base

2

⚠ **CAUTION**
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

3

4 EA

M4 x 20

⚠ **CAUTION**
- Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
- Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.

For 42LS3450

1

4EA

P4 x 16

Stand Body

Stand Base

2

⚠ **CAUTION**

• When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

3

4EA

M4 x 14

⚠ **CAUTION**

• Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
• Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.

🔔 **NOTE**

• Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

ENGLISH

For CS530, CS560 series

1

4 EA
M4 x 20

Stand Body

Front

Stand Base

2

⚠ **CAUTION**
• When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
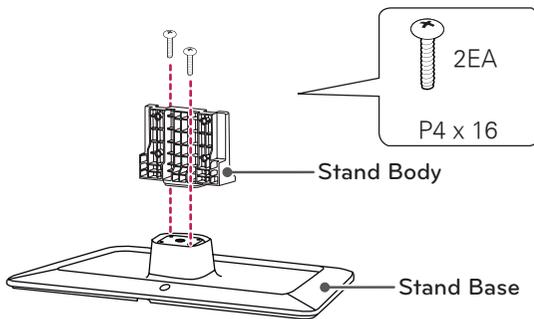
3

4 EA

M4 x 20

⚠ **CAUTION**
• Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
• Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.

❗ **NOTE**
• Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

For 22/26LS3500, 22/26LS3510
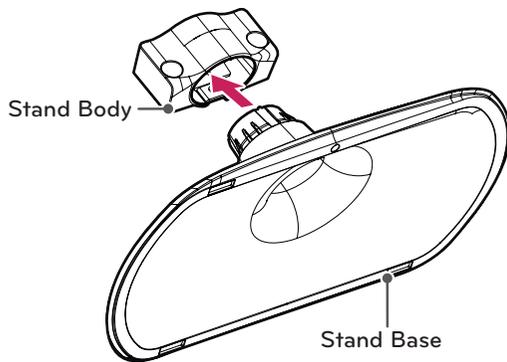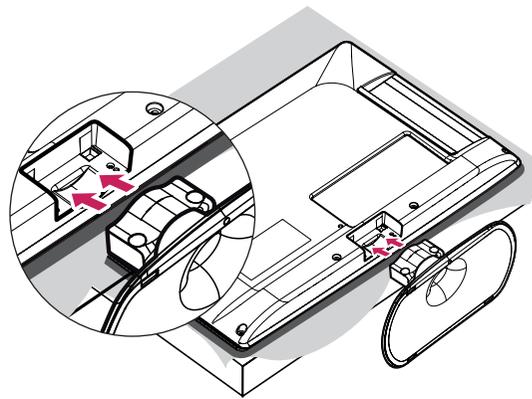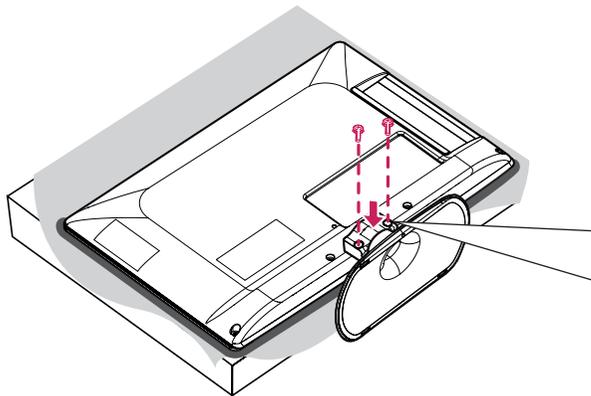
1

Stand Body

Stand Base

2

⚠ **CAUTION**
• When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.

3

(For 22LS3500, 22LS3510)
2 EA
P4 x 16
(For 26LS3500, 26LS3510)
2 EA
M4 x 14

⚠ **CAUTION**
• Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
• Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.
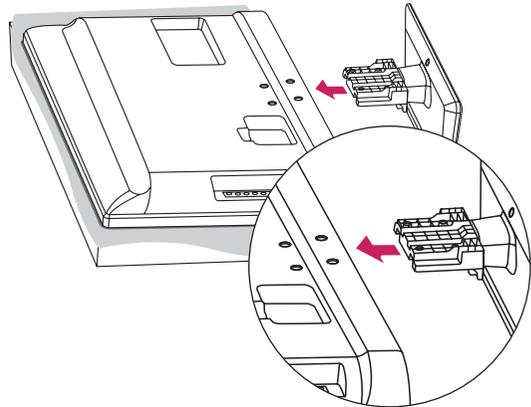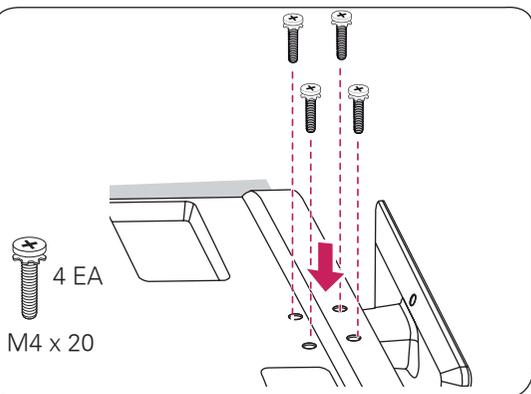
🛈 **NOTE**
• Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

ENGLISH

For 32LS3500, 32LS3510

1
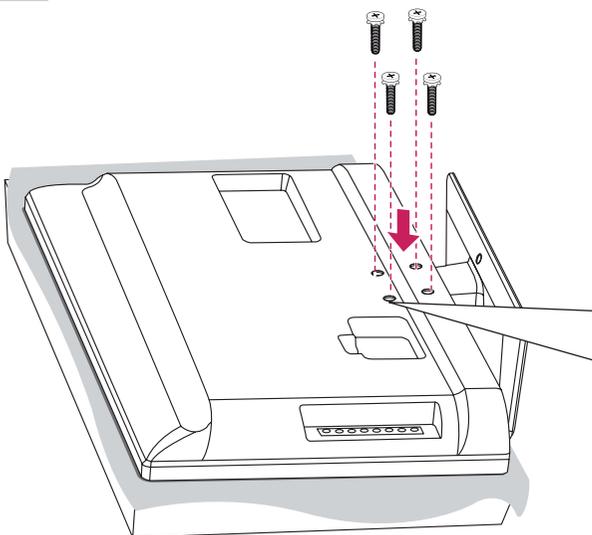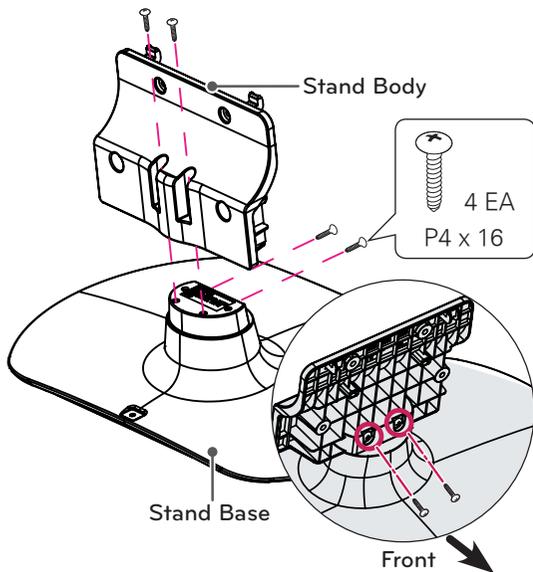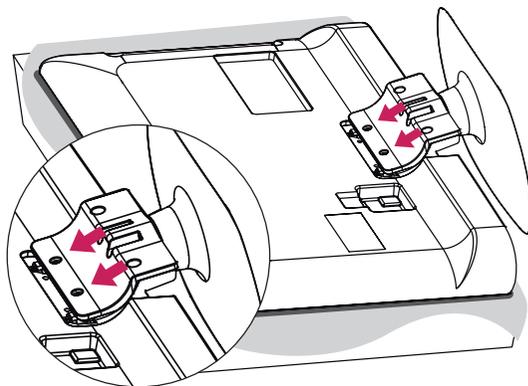

Stand Body

4 EA
P4 x 16

Stand Base

Front

2

⚠ **CAUTION**
• When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches.
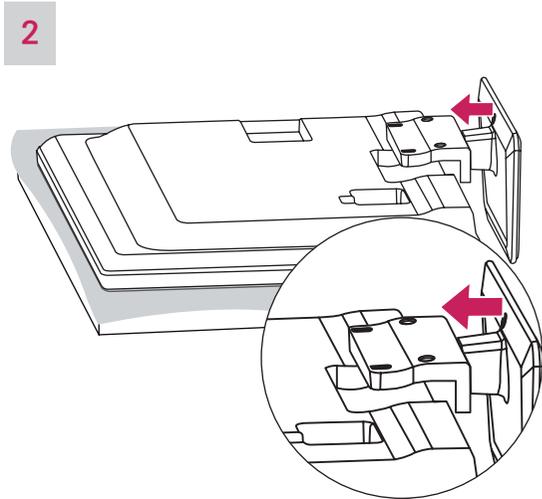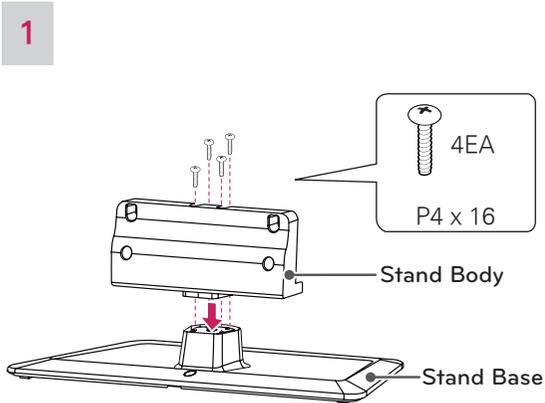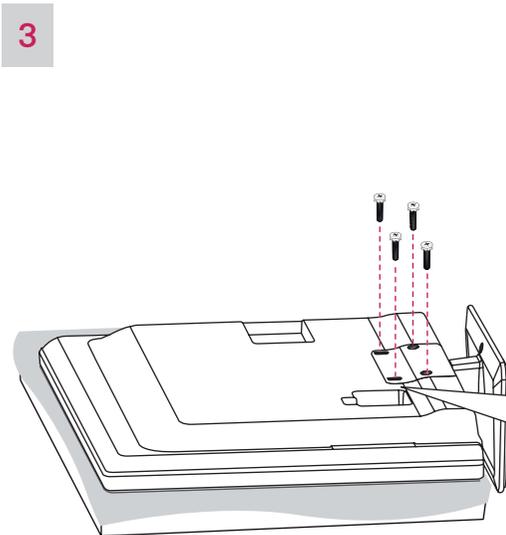
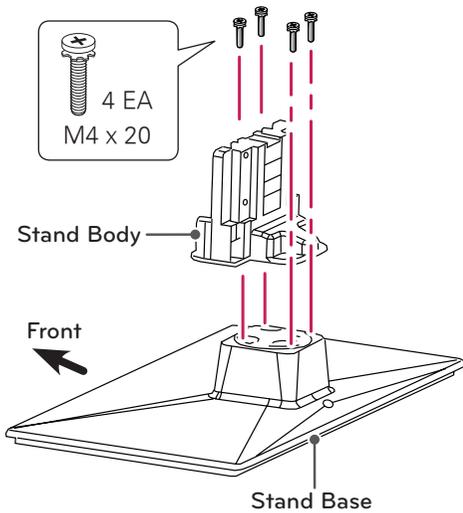**3**

4 EA

M4 x 14
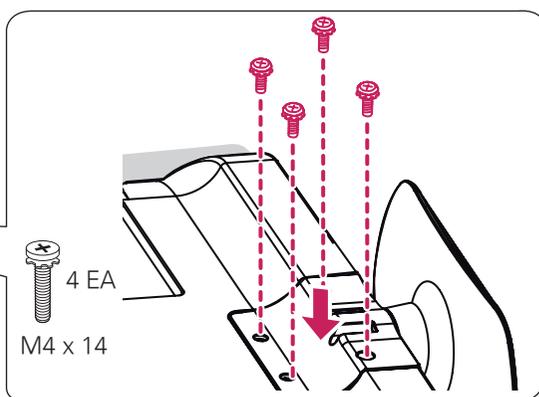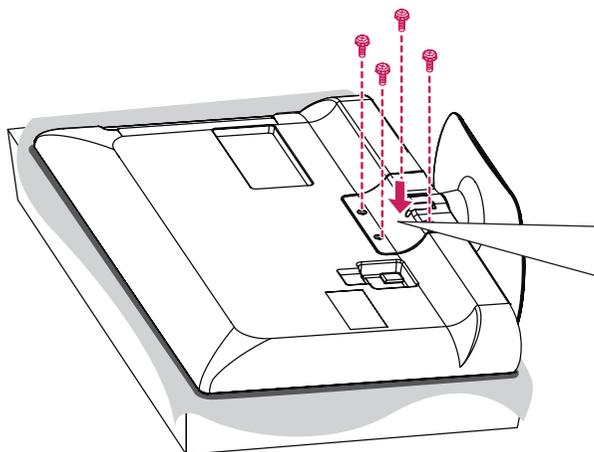
⚠ **CAUTION**
• Make sure that the screws are fastened completely. (If they are not fastened securely enough, the TV may tilt forward after being installed.)
• Do not fasten the screws with too much force; otherwise they may be worn out and get loosened.
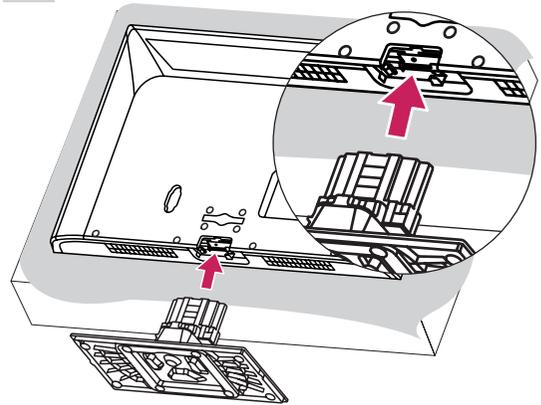
⚠ **NOTE**
• Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse.

Mounting on a table

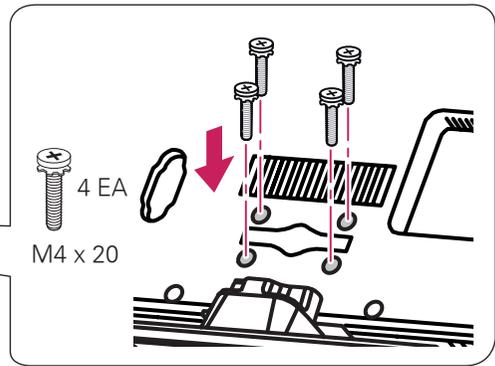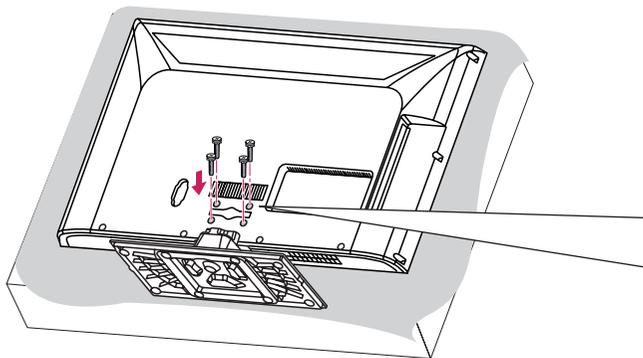1 Lift and tilt the TV into its upright position on a table.

 - Leave a 10 cm (4 inch) (minimum) space from the wall for proper ventilation.
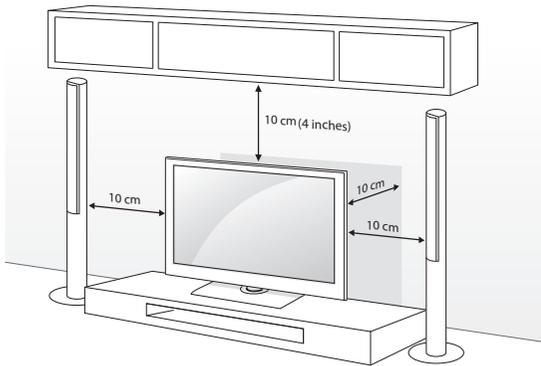
2 Connect the power cord to a wall outlet.

⚠ **CAUTION**
• Do not place the TV near or on sources of heat, as this may result in fire or other damage.

Adjusting the angle of the TV to suit view

(Depending on model)
Swivel 20 degrees to the left or right and adjust the angle of the TV to suit your view.
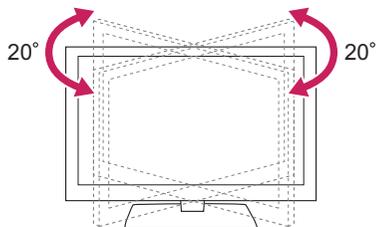
⚠ **CAUTION**
• When adjusting the angle of the TV, watch out for your fingers.
 - Personal injury may occur if hands or fingers are pinched. If the product is tilted too much, it may fall, causing damage or injury.

Securing the TV to a table

(For 32CS460, 32CS461, 42CS530, 32/37/42CS560, 32/42LS3400, 32/42LS3450, 32LS3500, 32LS3510)
Fix the TV to a table to prevent from tilting forward, damage, and potential injury.
Mount the TV on a table, and then insert and tighten the supplied screw on the rear of the stand.
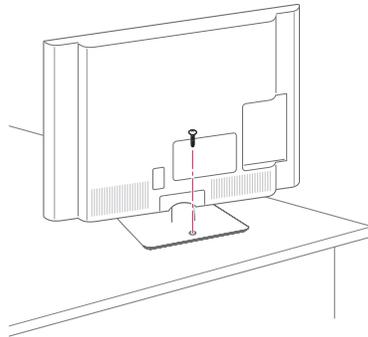
⚠ **WARNING**
• To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

ENGLISH

Securing the TV to a wall (optional)

(Depending on model)
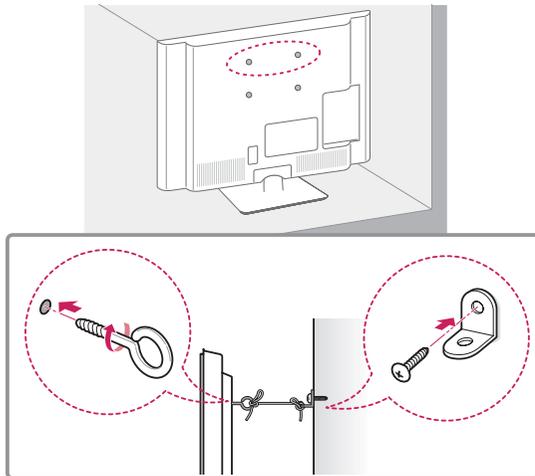
1 Insert and tighten the eye-bolts, or TV brackets and bolts on the back of the TV.
   - If there are bolts inserted at the eye-bolts position, remove the bolts first.

2 Mount the wall brackets with the bolts to the wall.
   Match the location of the wall bracket and the eye-bolts on the rear of the TV.

3 Connect the eye-bolts and wall brackets tightly with a sturdy rope.
   Make sure to keep the rope horizontal with the flat surface.

⚠ **CAUTION**
- Make sure that children do not climb on or hang on the TV.

ⓘ **NOTE**
- Use a platform or cabinet that is strong and large enough to support the TV securely.
- Brackets, bolts and ropes are optional. You can obtain additional accessories from your local dealer.

Using the Kensington security system (optional)

(For 32CS460, 32CS461, 42CS530, 32/37/42CS560, 22/26LS3500, 22/26LS3510)

The Kensington security system connector is located at the rear of the TV. For more information of installation and using, refer to the manual provided with the Kensington security system or visit http://www.kensington.com.

Connect the Kensington security system cable between the TV and a table.
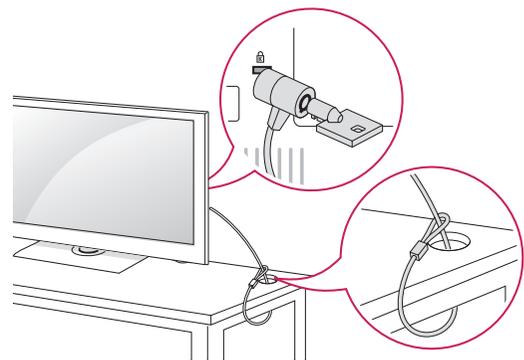
ⓘ **NOTE**
- The Kensington security system is optional. You can obtain additional accessories from your local dealer.

Mounting on a wall

Attach an optional wall mount bracket at the rear of the TV carefully and install the wall mount bracket on a solid wall perpendicular to the floor. When you attach the TV to other building materials, please contact qualified personnel.

We recommend that you use an LG brand wall mount when mounting the TV to a wall.
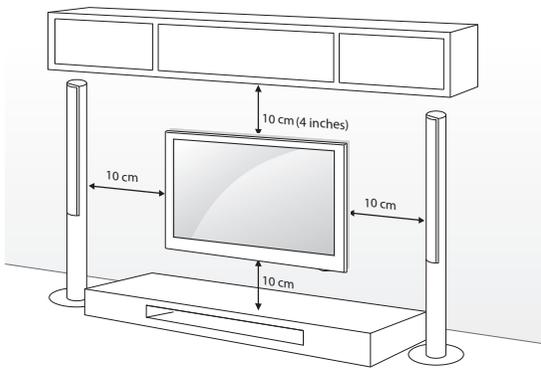
Make sure to use screws and wall mounts that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.

Model	22/26LS3500 22/26LS3510	32CS460 32CS461 32CS560 32LS3400 32LS3450 32LS3500 32LS3510
VESA	100 x 100	200 x 100
Standard screw	M4	M4
Number of screws	4	4
Wall mount bracket (optional)	LSW100B	LSW100B
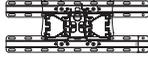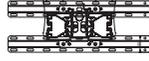
Model	42CS530 37/42CS560 42LS3400 42LS3450
VESA	200 x 200
Standard screw	M6
Number of screws	4
Wall mount bracket (optional)	LSW200BX LSW220BX
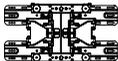
⚠ **CAUTION**
- Disconnect the power first, and then move or install the TV. Otherwise electric shock may occur.
- If you install the TV on a ceiling or slanted wall, it may fall and result in severe injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the TV and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.

🔘 **NOTE**
- Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is optional. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Make sure to use the proper length.
- For more information, refer to the manual supplied with the wall mount.

ENGLISH

Tidying cables

For CS460, CS461, CS530, CS560, LS3400

1 Gather and bind the cables with the cable management clip.

2 Fix the cable management clip firmly to the TV.

Cable management clip
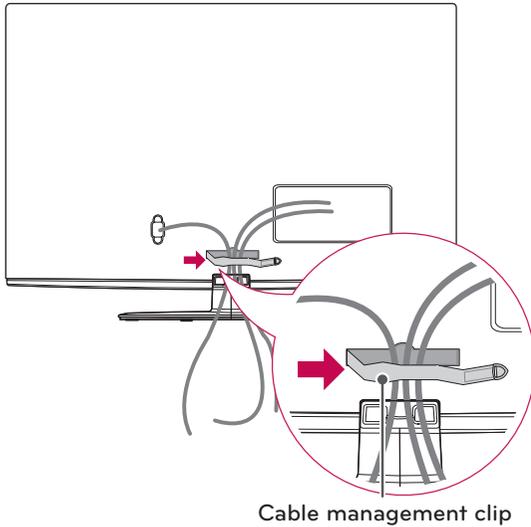
1 Gather and bind the cables with the cable holder.

For 22/26LS3500, 22/26LS3510
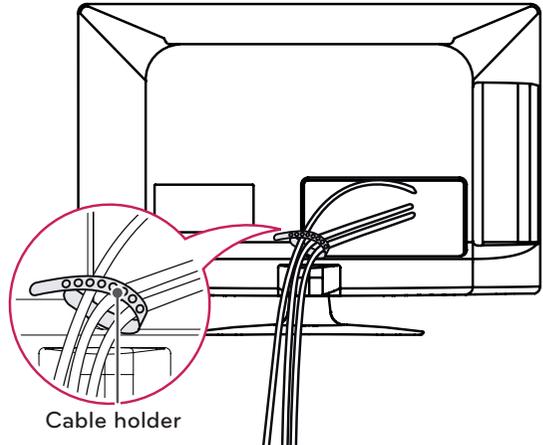
Cable holder

For 32LS3500, 32LS3510, 32/42LS3450
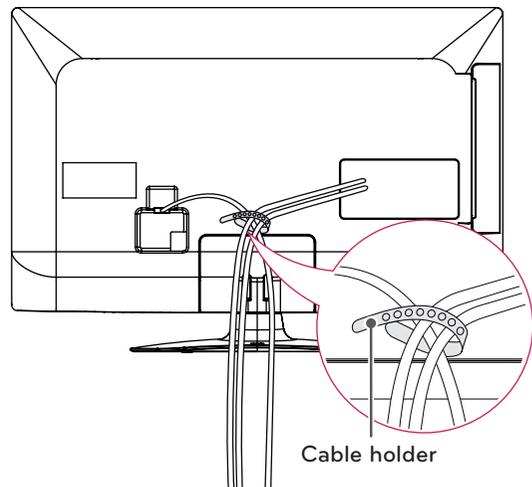
Cable holder

⚠ **CAUTION**
- Do not move the TV by holding the cable holder and power cord holder, as the cable holders may break, and injuries and damage to the TV may occur.

MAKING CONNECTIONS

Connect various external devices to the TV and switch input modes to select an external device.
For more information of external device's connection, refer to the manual provided with each device.
Available external devices are: HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

> **⊙ NOTE**
> - If you record a TV program on a DVD recorder or VCR, make sure to connect the TV signal input cable to the TV through a DVD recorder or VCR. For more information of recording, refer to the manual provided with the connected device.
> - The external device connection may differ from the model.
> - Connect external devices to the TV regardless of the order of the TV port.

Connecting to an antenna or cable

ANTENNA/
CABLE IN

Coaxial (75Ω)

VHF Antenna

UHF Antenna

Antenna

Terminal
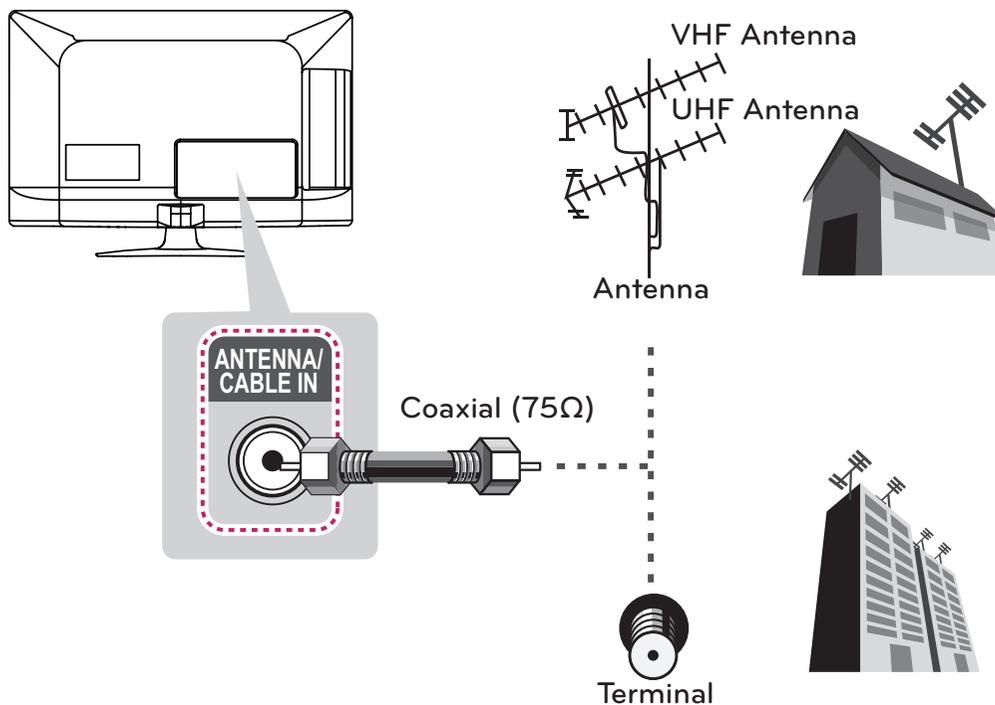
> **⚠ CAUTION**
> - Make sure not to bend the copper wire of the RF cable.
>
>   Copper wire
>
> - Complete all connections between devices, and then connect the power cord to the power outlet to prevent damage to your TV.
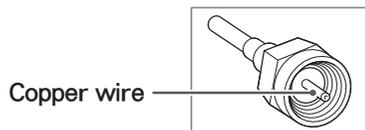
> **⊙ NOTE**
> - Use a signal splitter to use more than 2 TVs.
> - Visit http://lgknowledgebase.com for more information about the antenna and cable connection. Search for antenna.

Connecting to a HD receiver, DVD, or VCR player

Connect a HD receiver, DVD, or VCR player to the TV and select an appropriate input mode.

HDMI Connection

HDMI is the best way to connect a device.

Transmits the digital video and audio signals from an external device to the TV. Connect the external device and the TV with the HDMI cable as shown in the following illustration.

> ⚠ **NOTE**
> - Use the latest High Speed HDMI™ Cable with CEC (Customer Electronics Control) function.
> - High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.

**Choose any HDMI input port to connect.
It does not matter which port you use.**

(*Not Provided)

HDMI
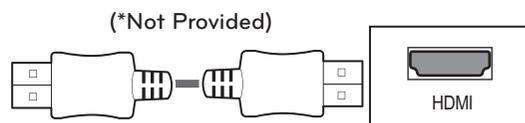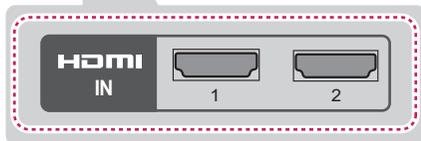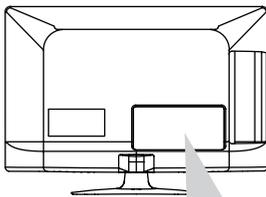
DVD / Blu-Ray / HD Cable Box / HD STB

Component Connection

Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the component cable as shown in the following illustration.

> ⚠ **NOTE**
>
> • If cables are installed incorrectly, it could case the image to display in black and white or with distorted color.
> • **Check to ensure the cable are matched with the corresponding color connection.**

DVD / Blu-Ray / HD Cable Box
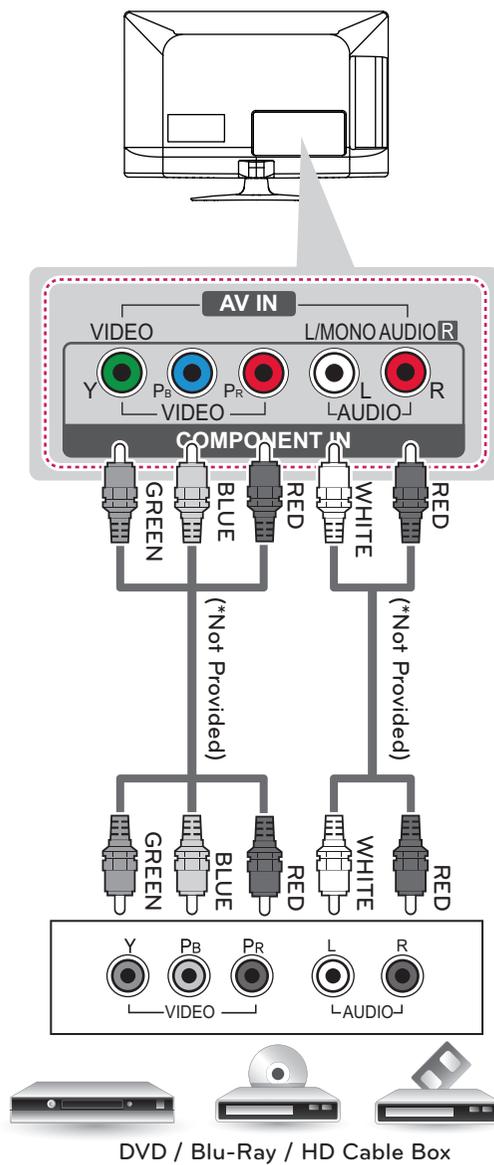
Composite Connection

Transmits the analog video and audio signals from an external device to the TV. Connect the external device and the TV with the composite cable as shown in the following illustration.

> **NOTE**
> - If you have a mono VCR, connect the audio cable from the VCR to the AUDIO L/MONO jack of the TV.

VCR / DVD / Blu-Ray / HD Cable Box
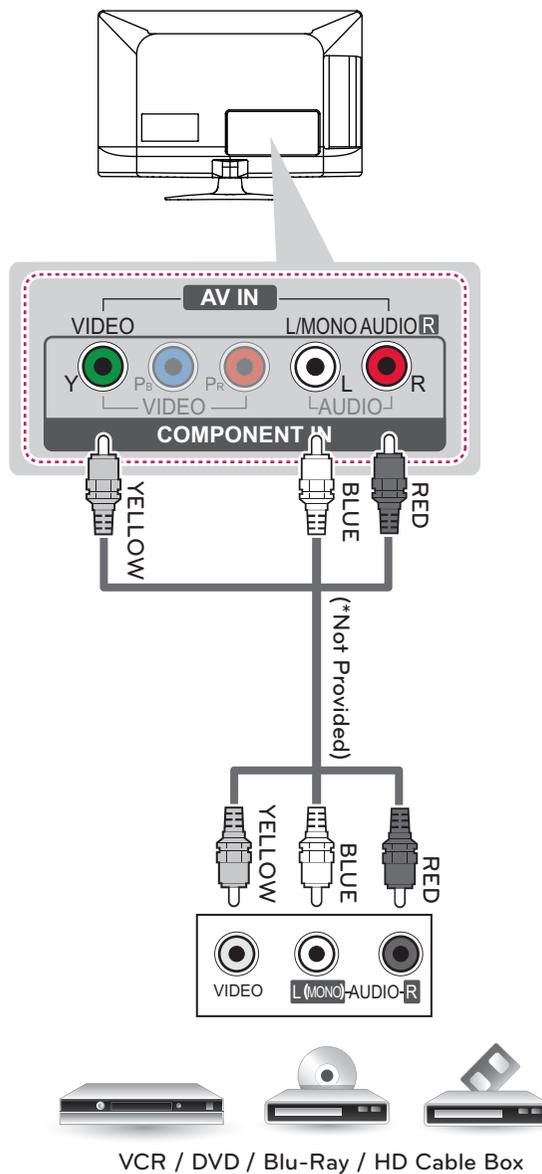
Connecting to a PC

> **NOTE**
> - It is recommended to use the TV with the HDMI connection for the best image quality.
> - Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
> - In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
> - The synchronization input form for Horizontal and Vertical frequencies is separate.
> - Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.

HDMI Connection

Choose any HDMI input port to connect.
It does not matter which port you use.

HDMI
IN   1   2

(*Not Provided)

HDMI

PC
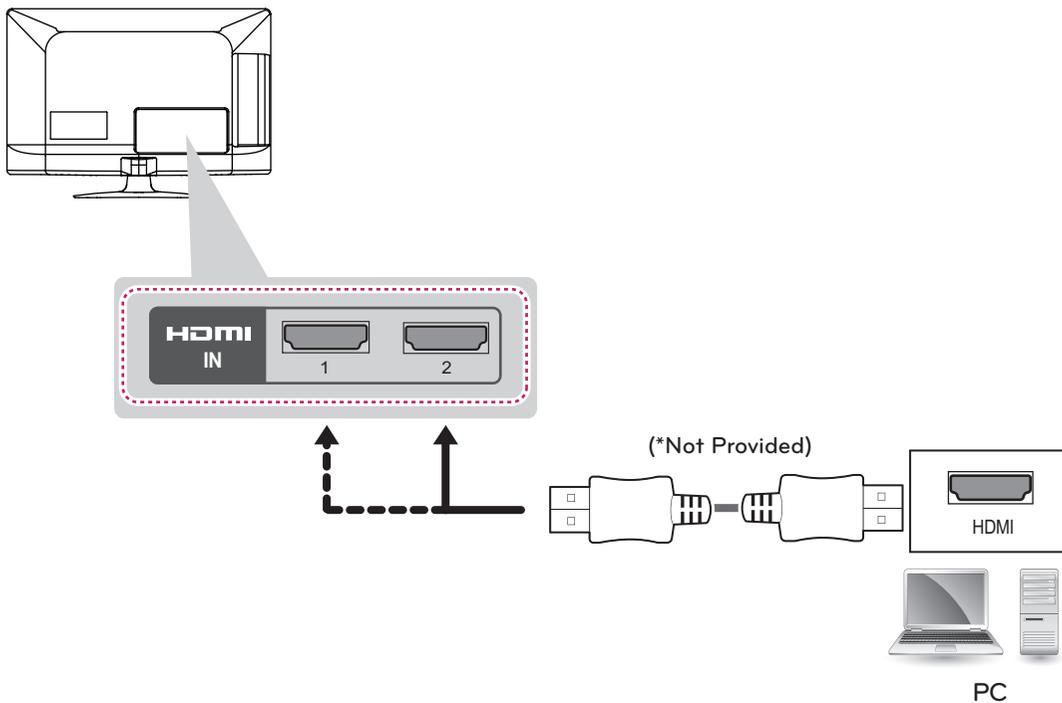
Connecting to a USB

Connect a USB storage device such as a USB flash memory, external hard drive, or a USB memory card reader to the TV.
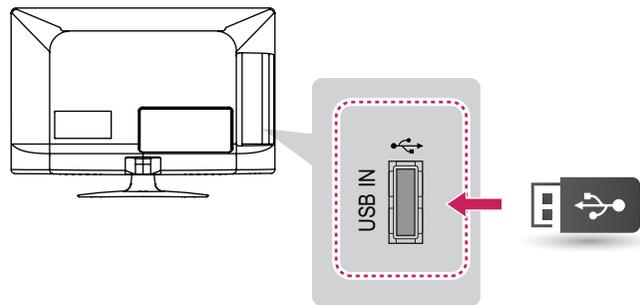
REMOTE CONTROL

The descriptions in this manual are based on the buttons on the remote control.
Please read this manual carefully and use the TV correctly.
To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching the ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse.
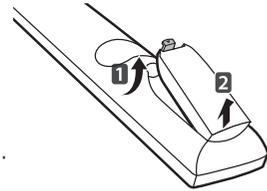
⚠ **CAUTION**

- Do not mix old and new batteries, as this may damage the remote control.

Make sure to point the remote control toward at the remote control sensor on the TV.
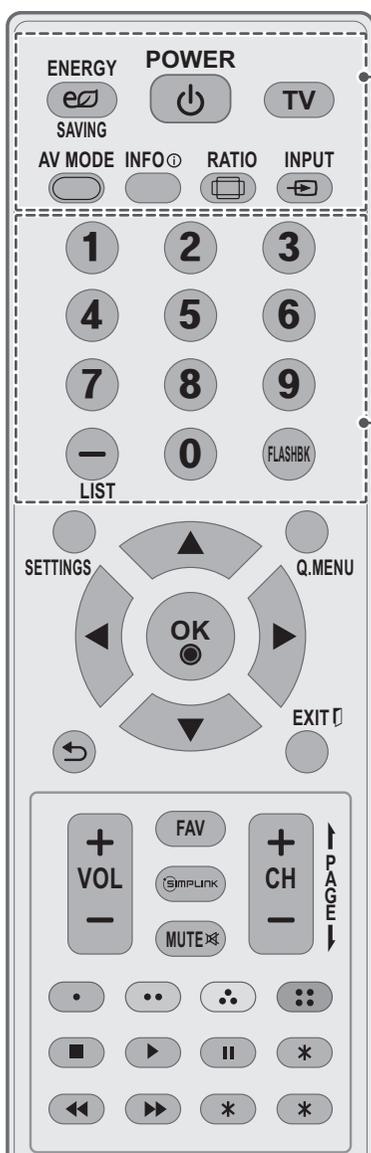
⏻ **POWER**
Turns the TV on or off.

e⊘ **ENERGY SAVING**
Adjusts the brightness of the screen to reduce energy consumption.

TV
Returns to the last TV channel.

AV MODE
Selects an AV mode.

INFO ⓘ
Views the information of the current program and screen.

▭ **RATIO**
Resizes an image.

⊡ **INPUT**
Rotates through inputs.
Also switches the TV on from standby.

Number button
Enters numbers.

LIST
Accesses the saved channel list.
- (Dash)
Inserts a dash between numbers such as 2-1 and 2-2.

FLASHBK
Alternates between the two last channels selected (pressing repeatedly).

ENGLISH
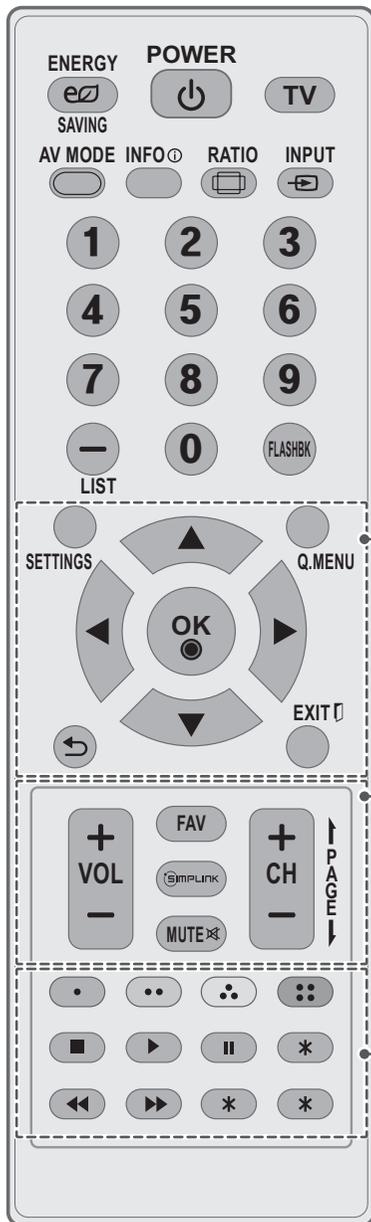
SETTINGS
Accesses the main menu.

Q.MENU
Accesses the quick menu.

Navigation buttons (up/down/left/right)
Scrolls through menus or options.

OK ◉
Selects menus or options and confirms your input.

↰ (BACK)
Returns to the previous level.

EXIT ▯
Clears all on-screen displays and returns to TV viewing.

╋ VOL ━
Adjusts the volume level.

FAV
Accesses your favorite channel list.

ⓈIMPLINK
Accesses the AV devices connected to the TV;
Opens the SIMPLINK menu.

MUTE ⊠
Mutes all sounds.

╋ CH ━
Scrolls through the saved channels.
▮ PAGE ▮
Moves to the previous or next screen.

Color buttons
These access special functions in some menus.

Control buttons
Controls the SIMPLINK compatible devices (USB,SIMPLINK).

✳
Not functional.

WATCHING TV

Connecting to the AC/DC adapter

(For 22/26LS3500, 22/26LS3510)
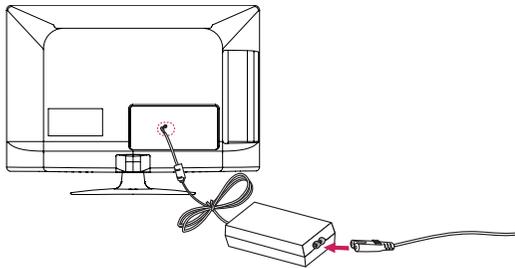
1   Connect the AC/DC adapter plug to the power input jack on the TV.

2   Connect the power cord to the AC/DC adapter first, then plug the power cord into the wall power outlet.

⚠ **CAUTION**
- Please be sure to connect the TV to the AC/DC power adapter before connecting the TV's power plug to a wall power outlet.

Turning the TV on for the first time

When you turn the TV on for the first time, the Initial setting screen appears. Select a language and customize the basic settings.

1   Connect the power cord to a power outlet. The Power indicator turns red and the TV switches to Standby mode.

2   In Standby mode, press the power button on the remote control to turn the TV on. The Initial setting screen appears if you turn the TV on for the first time.

🔔 **NOTE**
- You can also access **Initial Setting** by accessing **OPTION** in the main menu.

3   Follow the on-screen instructions to customize your TV settings according to your preferences.

| Language | Selects a language to display. |

⇩

| Mode Setting | Selects **Home Use** for the home environment. |

⇩

| Time Setting | Selects the time zone and daylight saving. |

⇩

| Auto Tuning | Scans and saves available channels automatically. |
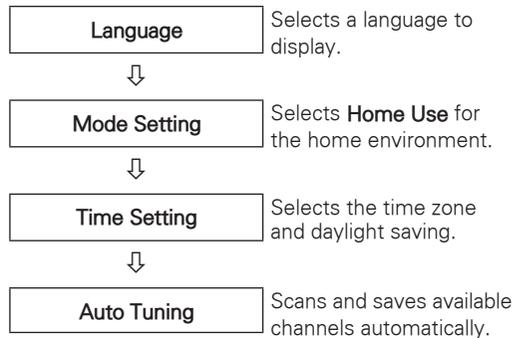
🔔 **NOTE**
- To display images in the best quality for your home environment, select **Home Use**.
- **Store Demo** is suitable for the retail environment.
- If you select **Store Demo**, any customized settings will switch back to the default settings of **Store Demo** in 5 minutes.

4   When the basic settings are complete, press **OK**.

🔔 **NOTE**
- If you do not complete the Initial setting, it will appear whenever the TV turns on.
- Disconnect the power cord from the power outlet when you do not use the TV for a long period of time.

5   To turn the TV off, press the power button on the remote control.

TROUBLESHOOTING

General

Problem	Solution
Cannot control the TV with the remote control.	• Check the remote control sensor on the product and try again. • Check if there is any obstacle between the product and the remote control. • Check if the batteries are still working and properly installed (⊕ to ⊕, ⊖ to ⊖).
No image display and no sound is produced.	• Check if the product is turned on. • Check if the power cord is connected to a wall outlet. • Check if there is a problem in the wall outlet by connecting other products.
Image appears slowly when the TV turns on.	• The image is muted during the product startup process. This is normal. If the image does not appear in a few minutes, unplug the TV for 30 seconds and try again. If the image still does not appear, contact the authorized service center in your local area.
Cannot connect external devices.	• Refer to the "Connection Overview" and connect an external device.
The TV turns off suddenly.	• Check the power control settings. The power supply may be interrupted. • Check if the Auto sleep feature is activated in the Time settings. Refer to the "Sleep Timer". • If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity. (Depending on model)

Audio

Problem	Solution
No sound is produced while images are displaying.	• Press **VOL +** or **-** button. • Check if the sound is muted by pressing **MUTE**. • Scroll to other channels. There may a problem with the broadcast. • Check if the TV Speaker feature is activated in the menu option.
No output from one of the speakers	• Adjust Balance in the menu option.
Unusual sound from inside the TV is produced.	• A change in ambient humidity or temperature may result in an unusual noise when the product turns on or off. There is no problem with your product.

ENGLISH

Video

Problem	Solution
An image displays in black and white or the color quality is poor.	• Adjust the color setting in the menu option. • Keep a sufficient distance between this product and other electronic products. • Scroll to other channels. There may a problem with the broadcast.
Horizontal or vertical bars appears or images blur	• Check if there are local interferences such as an electrical appliance or power tool.
Lines or streaks appear on images	• Check the antenna or aim the antenna to the proper direction.
Afterimages (ghosts) appear when the product turns off	• Pixels may have been damaged from a fixed image displayed for a long time (image burn). Use a screen saver to prevent the pixel damage on the screen.
The power is on but the screen appears extremely dark.	• Adjust the brightness and contrast in the menu option.
"No Signal" appears on the screen.	• Check if the signal cable is connected between the TV and products properly. • Check the selected input source by pressing **INPUT**.
Black spots appear on the screen.	• Several pixels in red, green, white, or black may appear on the screen that can attribute to the characteristics of the panel. • This is normal.
The display offset is wrong.	• Adjust the position setting in the Picture menu. • Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution using the display settings on the external device.
Thin lines appear in the background of the screen.	• Check the video cable connections.
The reception on some channels is poor	• Scroll to other channels. There may a problem with the broadcast. • The station signal may be weak. Aim the antenna to the proper direction. • Check if there is local interferences such as an electrical appliance or power tool.

ENGLISH

OPEN SOURCE SOFTWARE NOTICE

To obtain the source code under GPL, LGPL, MPL and other open source licenses, that is contained in this product, please visit http://opensource.lge.com.

In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping and handling) upon email request to opensource@lge.com. This offer is valid for three (3) years from the date on which you purchased the product.

SPECIFICATIONS

Product specifications may be changed without prior notice due to upgrade of product functions.

Television System	NTSC-M, ATSC, 64 & 256 QAM	
Program Coverage	VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135	
External Antenna Impedance	75 Ω	
Environment condition	Operating Temperature	0 - 40 °C
	Operating Humidity	Less than 80 %
	Storage Temperature	-20 - 60 °C
	Storage Humidity	Less than 85 %

MODELS		32CS460 (32CS460-UC)
		32CS461 (32CS461-UA)
Dimensions (W x H x D)	With stand	794.0 x 565.0 x 207.0 mm (31.2 x 22.2 x 8.1 inch)
	Without stand	794.0 x 504.0 x 73.5 mm (31.2 x 19.8 x 2.8 inch)
Weight	With stand	9.0 kg (19.8 lbs)
	Without stand	8.0 kg (17.6 lbs)
Current Value / Power consumption		1.1 A / 110 W
Power requirement		AC100 - 240 V ~ 50/60 Hz

MODELS		42CS530 (42CS530-UB)	32CS560 (32CS560-UE)
Dimensions (W x H x D)	With stand	1019.0 x 698.0 x 265.0 mm (40.1 x 27.4 x 10.4 inch)	795.0 x 568.0 x 207.0 mm (31.2 x 22.3 x 8.1 inch)
	Without stand	1019.0 x 631.0 x 76.5 mm (40.1 x 24.8 x 3.0 inch)	795.0 x 504.0 x 73.5 mm (31.2 x 19.8 x 2.8 inch)
Weight	With stand	15.1 kg (33.2 lbs)	9.2 kg (20.2 lbs)
	Without stand	13.4 kg (29.5 lbs)	8.1 kg (17.8 lbs)
Current Value / Power consumption		1.7 A / 170 W	1.2 A / 120 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	AC100 - 240 V ~ 50/60 Hz

MODELS		37CS560 (37CS560-UE)	42CS560 (42CS560-UE)
Dimensions (W x H x D)	With stand	913.0 x 639.0 x 265.0 mm (35.9 x 25.1 x 10.4 inch)	1019.0 x 698.0 x 265.0 mm (40.1 x 27.4 x 10.4 inch)
	Without stand	913.0 x 571.0 x 77.4 mm (35.9 x 22.4 x 3.0 inch)	1019.0 x 631.0 x 76.5 mm (40.1 x 24.8 x 3.0 inch)
Weight	With stand	12.8 kg (28.2 lbs)	15.1 kg (33.2 lbs)
	Without stand	11.1 kg (24.4 lbs)	13.4 kg (29.5 lbs)
Current Value / Power consumption		1.6 A / 160 W	1.7 A / 170 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	AC100 - 240 V ~ 50/60 Hz

ENGLISH

MODELS		32LS3400 (32LS3400-UA)	42LS3400 (42LS3400-UA)
Dimensions (W x H x D)	With stand	795.0 x 566.0 x 207.0 mm (31.2 x 22.2 x 8.1 inch)	1018.0 x 696.0 x 261.0 mm (40.0 x 27.4 x 10.2 inch)
	Without stand	795.0 x 504.0 x 73.5 mm (31.2 x 19.8 x 2.8 inch)	1018.0 x 629.0 x 76.5 mm (40.0 x 24.7 x 3.0 inch)
Weight	With stand	9.1 kg (20.0 lbs)	14.7 kg (32.4 lbs)
	Without stand	8.1 kg (17.8 lbs)	13.1 kg (28.8 lbs)
Current Value / Power consumption		1.0 A / 70 W	1.2 A / 120 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	AC100 - 240 V ~ 50/60 Hz

MODELS		32LS3450 (32LS3450-UA)	42LS3450 (42LS3450-UA)
Dimensions (W x H x D)	With stand	738.0 x 501.0 x 185.0 mm (29.0 x 19.7 x 7.3 inch)	972.0 x 635.0 x 212.0 mm (38.2 x 25.0 x 8.3 inch)
	Without stand	738.0 x 438.0 x 86.0 mm (29.0 x 17.2 x 3.4 inch)	972.0 x 571.0 x 86.0mm (38.2 x 22.4 x 3.4 inch)
Weight	With stand	7.5 kg (16.5 lbs)	11.8 kg (26.0 lbs)
	Without stand	6.9 kg (15.2 lbs)	10.7 kg (23.5 lbs)
Current Value / Power consumption		0.9 A / 60 W	1.2 A / 120 W
Power requirement		AC100 - 240 V ~ 50/60 Hz	AC100 - 240 V ~ 50/60 Hz

MODELS		22LS3500 (22LS3500-UD) 22LS3510 (22LS3510-UA)	26LS3500 (26LS3500-UD) 26LS3510 (26LS3510-UA)
Dimensions (W x H x D)	With stand	523.0 x 376.0 x 140.0 mm (20.5 x 14.8 x 5.4 inch)	627.0 x 442.0 x 162.0 mm (24.6 x 17.4 x 6.3 inch)
	Without stand	523.0 x 339.0 x 31.6 mm (20.5 x 13.3 x 1.2 inch)	627.0 x 402.0 x 30.1 mm (24.6 x 15.8 x 1.1 inch)
Weight	With stand	3.5 kg (7.7 lbs)	4.5 kg (9.9 lbs)
	Without stand	3.2 kg (7.0 lbs)	4.2 kg (9.2 lbs)
Power requirement		24 V===, 1.4 A	24 V===, 1.8 A
Adapter (DC Power)		In: AC 100 - 240 V ~ 50/60 Hz	
		Out: DC 24 V, 2.7 A or 2.71 A	

MODELS		32LS3500 (32LS3500-UD) 32LS3510 (32LS3510-UA)
Dimensions (W x H x D)	With stand	755.0 x 530.0 x 239.0 mm (29.7 x 20.8 x 9.4 inch)
	Without stand	755.0 x 479.0 x 45.8 mm (29.7 x 18.8 x 1.8 inch)
Weight	With stand	9.1 kg (20.0 lbs)
	Without stand	8.3 kg (18.2 lbs)
Current Value / Power consumption		0.6 A / 60 W
Power requirement		AC100 - 240 V ~ 50/60 Hz

ENGLISH

HDMI (PC) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
640 x 350	31.468	70.09
720 x 400	31.469	70.08
640 x 480	31.469	59.94
800 x 600	37.879	60.31
1024 x 768	48.363	60.00
1360 x 768	47.712	60.015
1152 x 864	54.348	60.053
1280 x 1024	63.981	60.02
1920 x 1080	67.50	60.00

For 42CS460, 32/42CS560, 42LM3400, 42LS3400, 42LS3450

HDMI (DTV) supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720 x 480p	31.47 31.50	59.94 60.00
1280 x 720p	44.96 45.00	59.94 60.00
1920 x 1080i	33.72 33.75	59.94 60.00
1920 x 1080p	26.97 27.00 33.71 33.75 67.432 67.50	23.976 24.00 29.97 30.00 59.94 60.00

Component port connecting information

Component ports on the TV	Y	P_B	P_R

	Y	P_B	P_R
Video output ports on DVD player	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

Component supported mode

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
720 x 480i	15.73 15.73	59.94 60.00
720 x 480p	31.47 31.50	59.94 60.00
1280 x 720p	44.96 45.00	59.94 60.00
1920 x 1080i	33.72 33.75	59.94 60.00
1920 x 1080p	26.97 27.00 33.71 33.75 67.432 67.50	23.976 24.00 29.97 30.00 59.94 60.00

CHILD SAFETY:

It Makes A Difference How and Where You Use Your Flat Panel Display

Congratulations on your purchase! As you enjoy your new product, please keep these safety tips in mind:

THE ISSUE

- The home theater entertainment experience is a growing trend and larger flat panel displays are popular purchases. However, flat panel displays are not always supported on the proper stands or installed according to the manufacturer's recommendations.
- Flat panel displays that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests or carts may fall over and cause injury.

THIS MANUFACURER CARES!

- The consumer electronics industry is committed to making home entertainment enjoyable and safe.

TUNE INTO SAFETY

- One size does NOT fit all. Follow the manufacturer's recommendations for the safe installation and use of your flat panel display.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don't allow children to climb on or play with furniture and television sets.
- Don't allow place flat panel displays on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" flat panel display. Care should be taken to place or install the display where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the flat panel display so that they cannot be pulled or grabbed by curious children.

WALL MOUNTING: IF YOU DECIDE TO WALL MOUNT YOUR FLAT PANEL DISPLAY, ALWAYS:

- Use a mount that has been recommended by the display manufacturer and/or listed by an independent laboratory (such as UL, CSA, ETL).
- Follow all instructions supplied by the display and wall mount manufacturers.
- If you have any doubts about your ability to safely install your flat panel display, contact your retailer about professional installation.
- Make sure that the wall where you are mounting the display is appropriate. Some wall mounts are not designed to be mounted to walls with steel studs or old cinder block construction. If you are unsure, contact a professional installer.
- A minimum of two people are required for installation. Flat panel displays can be heavy

CEA
Consumer Electronics Association
www.CE.org/safety

LG

Life's Good

The model and serial number of the TV is located on the back and/or one side of the TV. Record it below should you ever need service.

MODEL _____

SERIAL _____

The extended owner's manuals that contain information on the advanced features of this LG TV are located on the CD-ROM provided in an electronic version.
To read these files, you will need to use the personal computer (PC) equipped with a CD-ROM drive.

LG Customer Information Center

For inquires or comments, visit www.lg.com or call;

1-800-243-0000	USA, Consumer User
1-888-865-3026	USA, Commercial User
1-888-542-2623	CANADA

Register your product Online!
www.lg.com

(For LS3400,LS3450, LS3500 series USA, Canada, Mexico)

This product qualifies for ENERGY STAR in the "factory default (Home Use)" setting.

Changing the factory default settings or enabling other features may increase power consumption that could exceed the limits necessary to quality for ENERGY STAR.

ENERGY STAR